



# **Model Name: PP-9617**

## **Document Version: I**

<b>Customer</b>	<b>Date</b>
<b>Checked &amp; Approved by</b>	

<b>FEC Prepared by</b>	<b>Date</b>
<b>FEC Approved by</b>	



# ***AerPOS 17" Panel PC***

## ***User's Manual***

**Version 0.1**

PP-9617

17" Bezel Free Performance POS Terminal

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## Record of Revision

Date	Specs Ver.	Description	Note
2014/1/28	V0.1	Initial	Ben

## Safety and Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
14. If any of the following situations arises, get the equipment checked by service personnel:
  - a. The power cord or plug is damaged.
  - b. Liquid has penetrated into the equipment.
  - c. The equipment has been exposed to moisture.
  - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
  - e. The equipment has been dropped and damaged.
  - f. The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.**

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## Chapter 1

# Introduction

### AerPOS ( PP-9617 ) Introduction

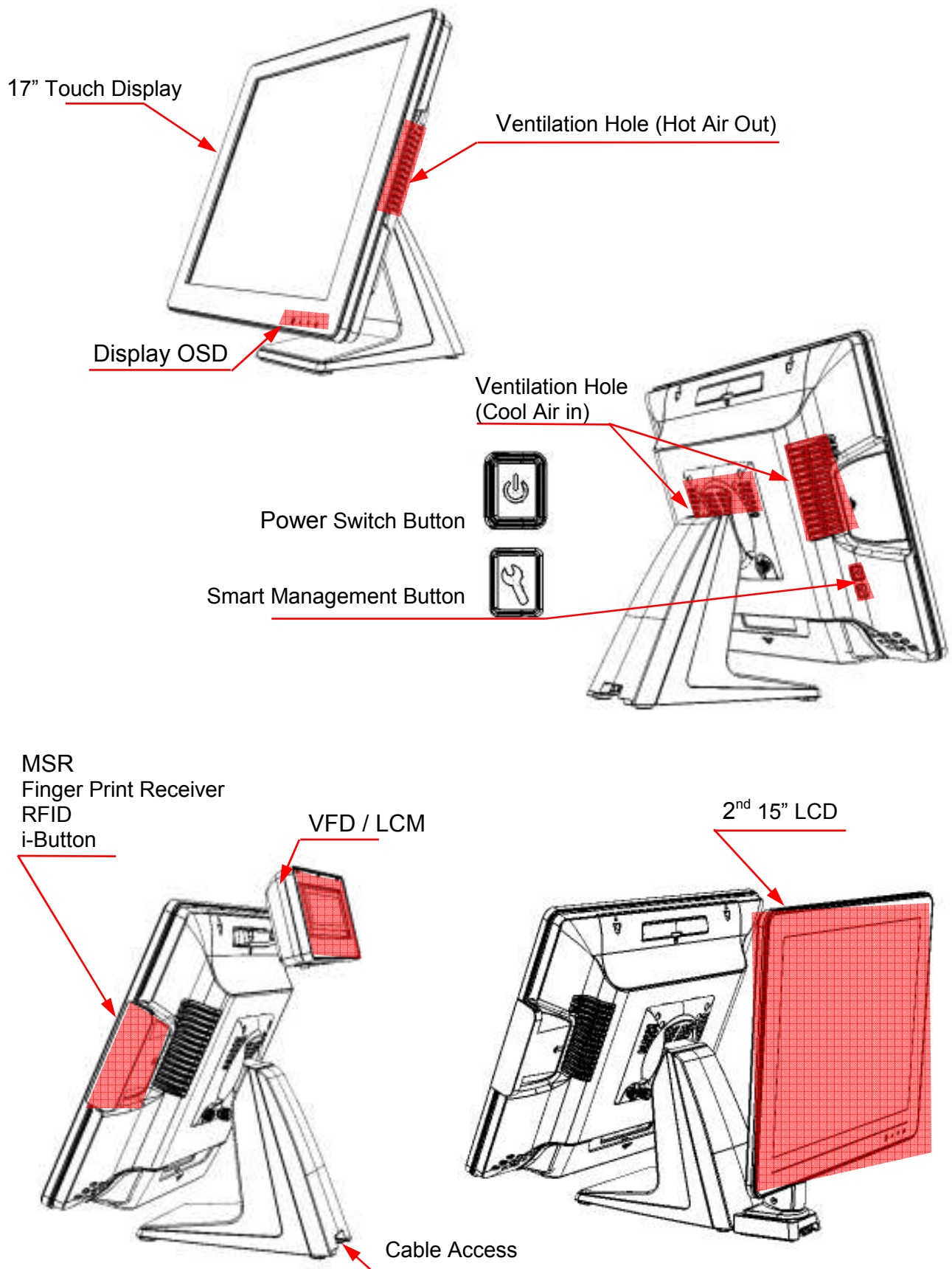
AerPOS is the perfect combination of reducing the Total Cost Ownership and enhanced quality requirement for POS system. With the design base on quality, space-effective and performance, its modularized design helps user no matter on the maintenance but the further upgrade in a very easy way.

#### Main Features:

- The high quality of resistive touch or durable tempered glass of projective capacitive touch both are IP65 front panel compliant.
- Desktop solution with high performance is perfect for heavy loading environment.
- Modularized design and easy maintenance for the key parts of its system, such as storage device, CPU module, HDD and 2<sup>nd</sup> I/O
- With various devices support and sufficient I/O connectivity requirements.
- Integrated VFD and the 2<sup>nd</sup> 15" LCD display.



## A Quick Tour for PP-9617

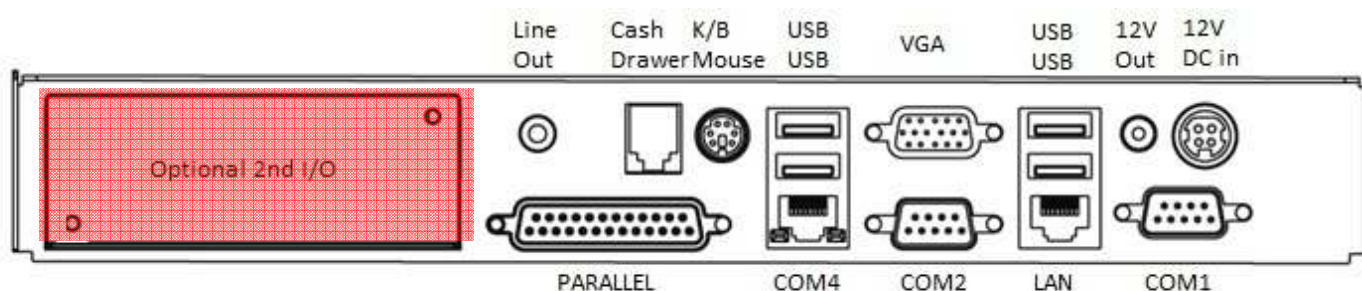




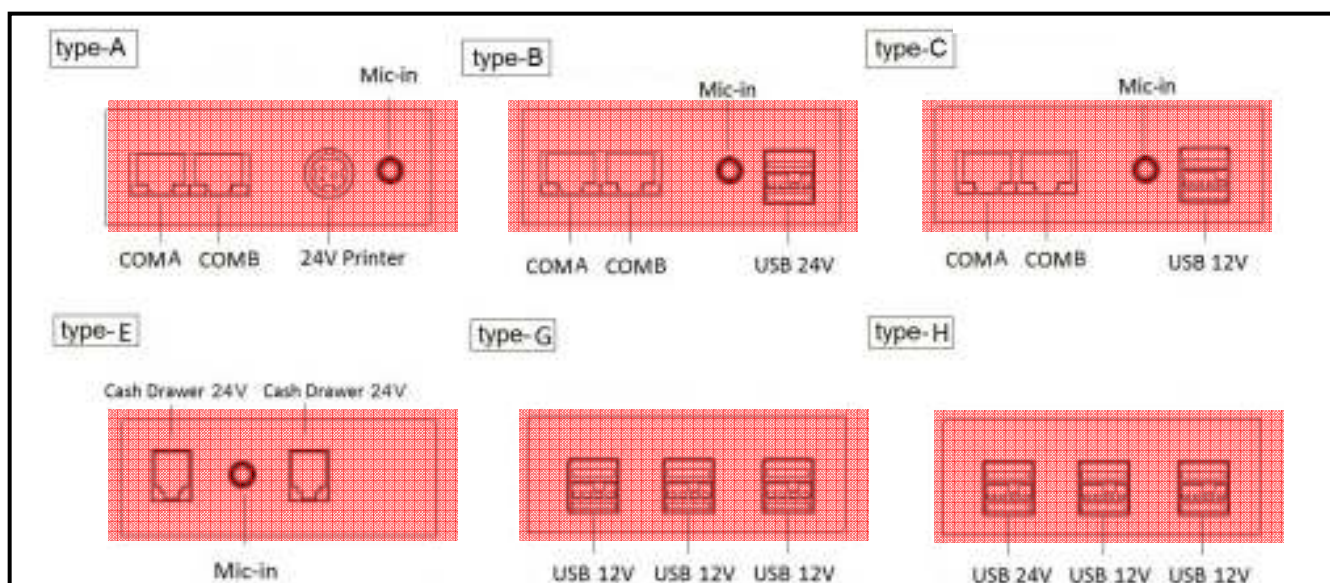
## PP-9617 Dimension



## Rear I/O Panel Connectivity



### Optional 2nd I/O



DC out	DC out connector	12V DC output connect to 12V peripherals or devices
Description		
Parallel	D-sub25	Connect to parallel devices, CRT monitors
K/B Mouse	PS2	Connect speakers to this port Connect to PS2 K/B or PS2 Mouse
DC IN	DC IN connector	Connect to Ethernet Connect the 12V power adapter to this port
COM 4	RJ-45	Connect to standard A type USB devices
COM 1	D-sub9	Serial port COM 4 Connect Pole Type VFD(need factory setting on I/O board)
COM 2	D-sub9	Serial Port COM 1
COM Status	LED	Serial Port COM 2
USB	A type USB	RI—NA LED ; 5V—Green Light ; 12V – Orange Light
Cash Drawer	RJ-11	Connect to standard A type USB devices
		Connect to 12V Cash Drawer

I/O Port	Connector Type	Description
<b>Optional 2nd IO Board is only available as pre-installed in FEC factory</b>		
<b>Type A</b>		
24V DC Out	24V 3pins	Connect to Thermal Printer devices with 24V Power
Mic In	Microphone Connector	Connect microphone to this port
COM A	RJ-45	Serial Port COM
COM B	RJ-45	Serial Port COM
<b>Type B</b>		
Power USB	Power USB 24V	Connect to standard A type USB devices with 24V Power Supply
Mic In	Microphone Connector	Connect microphone to this port
COM A	RJ-45	Serial Port COM
COM B	RJ-45	Serial Port COM
<b>Type C</b>		
Power USB	Power USB 12V	Connect to standard A type USB devices with 12V Power Supply
Mic In	Microphone Connector	Connect microphone to this port
COM A	RJ-45	Serial Port COM
COM B	RJ-45	Serial Port COM
<b>Type E</b>		
Cash Drawer	RJ11	Connect to 24V Cash Drawer
Cash Drawer	RJ11	Connect to 24V Cash Drawer
Mic In	Microphone Connector	Connect microphone to this port
<b>Type G</b>		
Power USB x 3	Power USB 12V x 3	Connect to standard A type USB devices with 12V Power Supply
<b>Type H</b>		
Power USB x 1	Power USB 24V x 1	Connect to standard A type USB devices with 24V Power Supply
Power USB x 2	Power USB 12V x 2	Connect to standard A type USB devices with 12V Power Supply



Before you unplug the power USB cable from I/O panel, please ensure unplug the A/C Cord in advanced.

## Aer POS PP-9617 Packing List

2	12V 150W Power Adaptor	2	RJ-45 to D-sub9 Convert Cable
3	AC Power Cable	3	MSR / RFID / Finger Print Receiver / I-Button
		4	20x2 VFD / 20x2 LCM / 240x64 LCM
		5	15" / 11.6" 2 <sup>nd</sup> Display Bracket

## Chapter 2

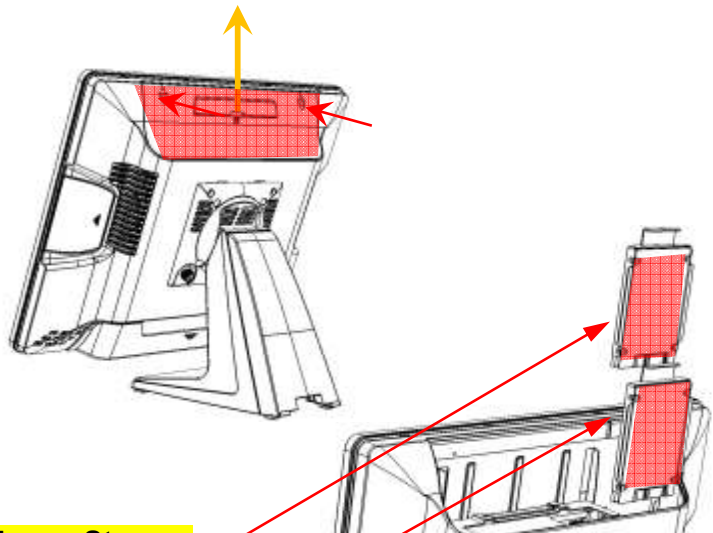
# Hardware Installation and Upgrading

## 2 x 2.5" Hard Disk Drive Installation for PP9617R(with RAID)

1. Turn off power and remove power cord from the terminal

Unscrew the maintenance door at the upper rear side of the terminal body

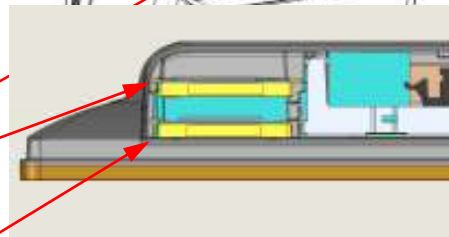
Open the maintenance door and Extract 2.5" SATA storage bracket out  
(no cable connected)



**Primary Storage**

Place storage driver on the bracket and fasten it with 4 screws.

Secondary Storage  
Secondary Storage

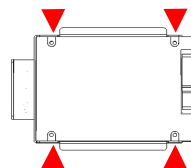


**Primary Storage**

Restore the maintenance door to the system.

Fix the maintenance door with a screw.

Connect power cord to the system.



## 1 x 2.5" Hard Disk Drive Installation for PP9617R (with RAID)

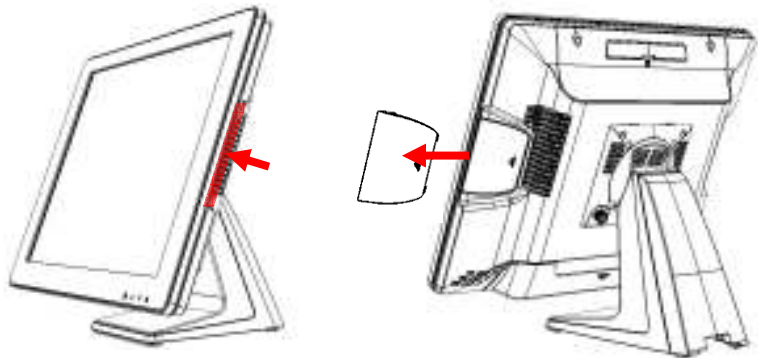
1. Act same step as above
2. Insert storage driver at the place of Primary only

## 1 x 2.5" Hard Disk Drive Installation for PP9617

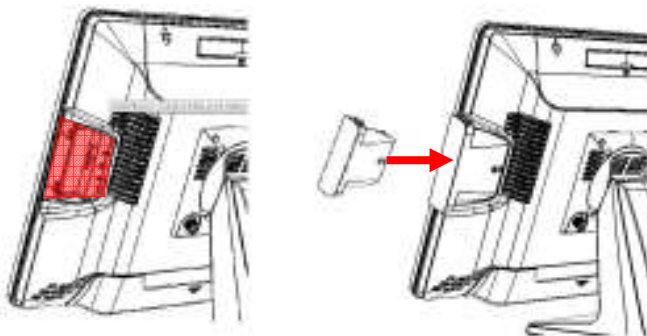
1. Act same step as above
2. Insert storage driver at the place of Primary only

## MSR / Finger Print Reciever / RFID / iButton Installation

1. Remove the plastic cover at the back of Touch Display Module



Insert the MSR / RFID / Finger Print Receiver / I-button Module into USB A-Type Connector. Fix the Touch Display Module with one screw.

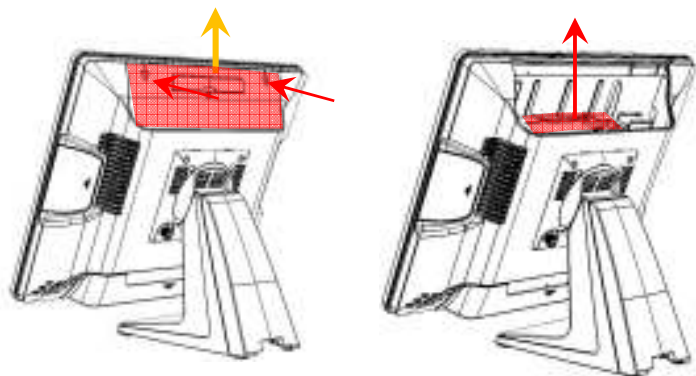


Make sure the USB connected and screw is fastened well.

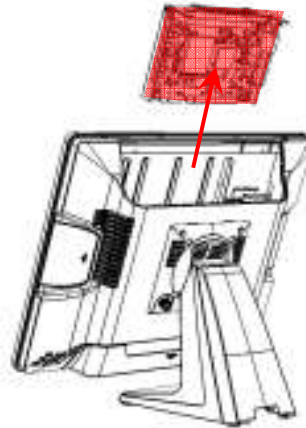
If you are looking for the detail Utility of MCR, Finger Print Reader, I-button Reader, RFID Reader, please contact FEC's FAE.(Please refer to FEC website for more information, <http://www.fecpos.com> )

## MB / Heatsink & Smart Fan / Memory Installation

1. Remove the maintenance door by releasing two screws at the upper rear side of the terminal body.



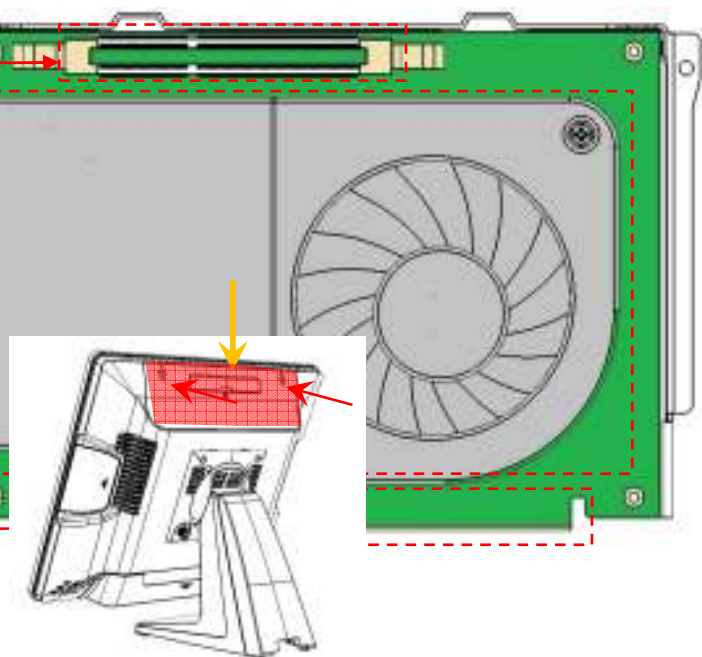
2. Lift up and Pull out the MB Module from the Terminal Chassis.



DDR-3 204 Pin Memory

Smart Fan, Heatsink CPU & Chipset

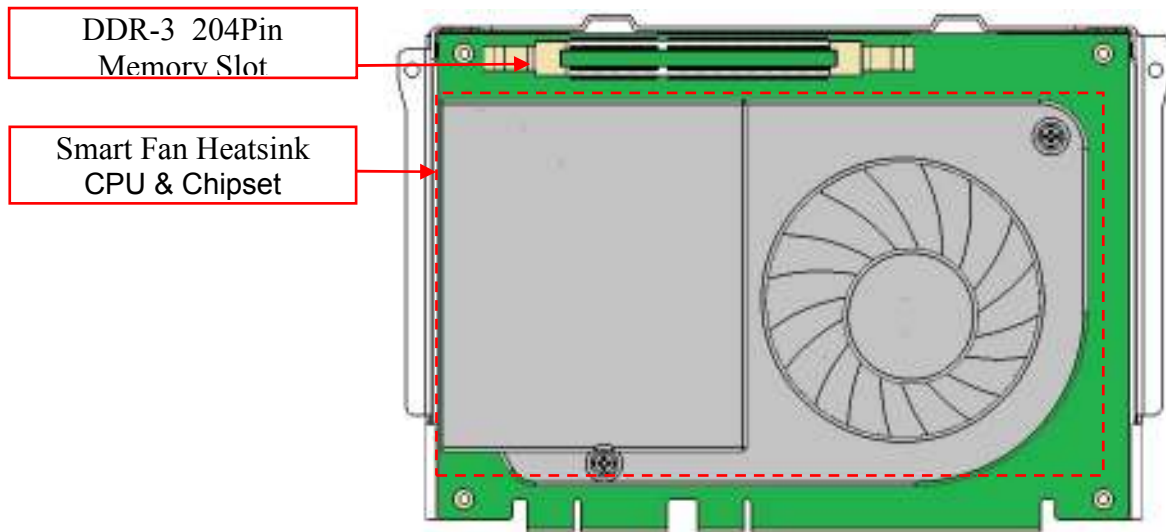
3. During the MB installation, Please Make sure the MB Golden Finger is well connect with IO Board Slot.



**Memory (DDRIII RAM) & CPU Installation / MB Pin Define, Battery and Clear CMOS Setting**



1. **Disassembly the MB Module, then Memory installation can be done from the top side of MB Module. CPU installation has to remove Thermal Fan Module by 2 screws, after the CPU installation, please ensure the thermal pads between CPU, chipset and heatsink are well contacted.**



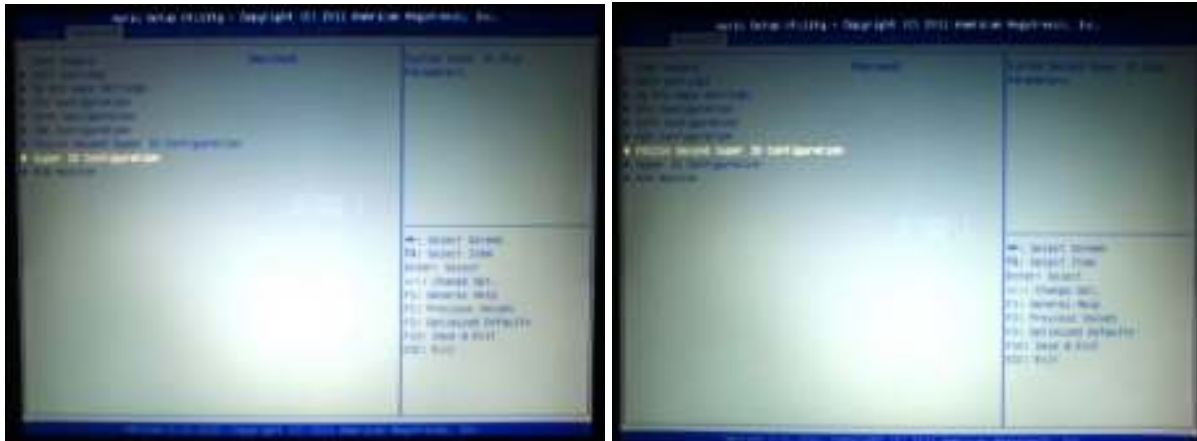
2. **According to the MB on-board connectors or golden finger pin define and Battery Setting, CMOS Clear, please refer to the FH-H611 MB Manual.**

## **COM Port Power Setting**

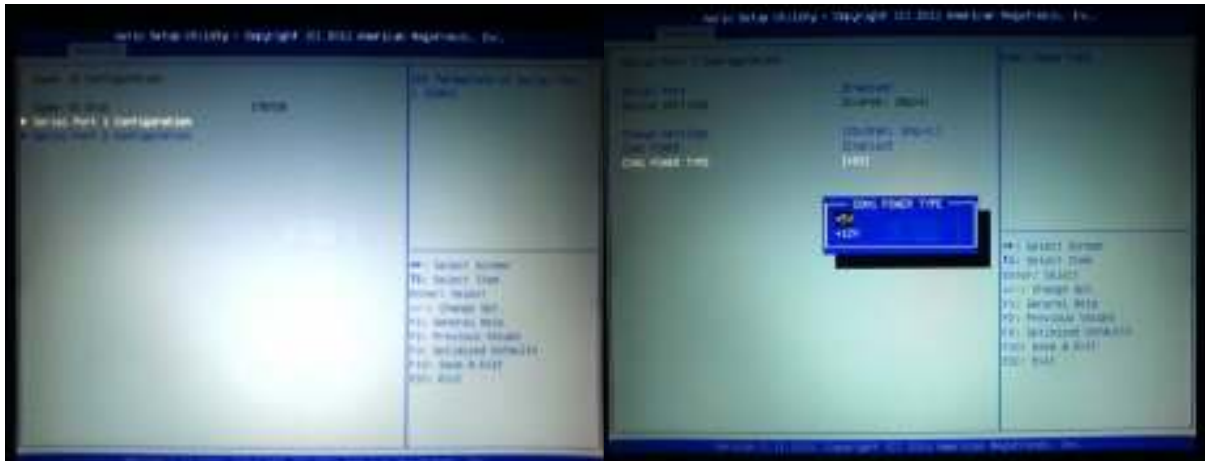
**PP-9617 COM Port Power can adjust via BIOS or Smart Management Tool.**



1. COM Port Power Configuration:
2. Advance > Super IO Configuration > Serial Port **1 or 2** Configuration,,[[]]]]]]]]  
Advance > F81865 Super IO Configuration > Serial Port **3 or 4** Configuration



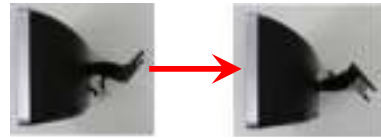
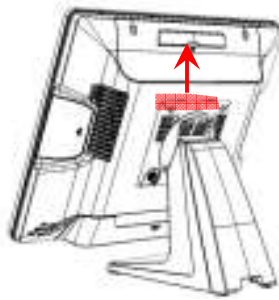
- 3. COM 1 or 2 or 3 or 4 Port Power > Enable**  
**COM 1 or 2 or 3 or 4 Power Type > +5V or +12V (select the proper power output for proper com port devices)**



**If you need more information about the BIOS setting or Smart Management Setting, please refer to the MB Manual or Smart Management Manual or contact FEC's FAE.**

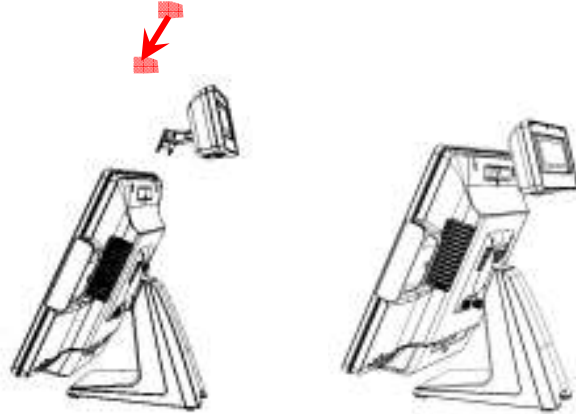
## Integrated VFD / LCM Installation

1. Remove the VFD Plastic cover from the terminal



2. Rotate the arm of VFD with 180°

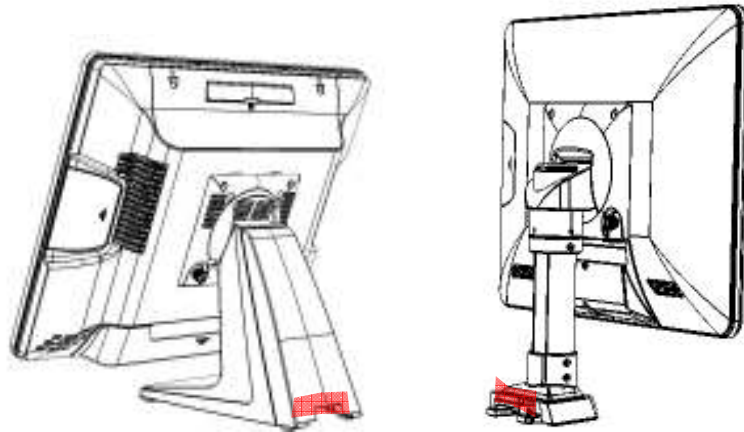
3. Connect the COM 3 internal cable between Terminal and VFD / LCM Module and install the VFD/ LCM module with Terminal. Fasten one screw back and make sure VFD/LCM module is fixed.



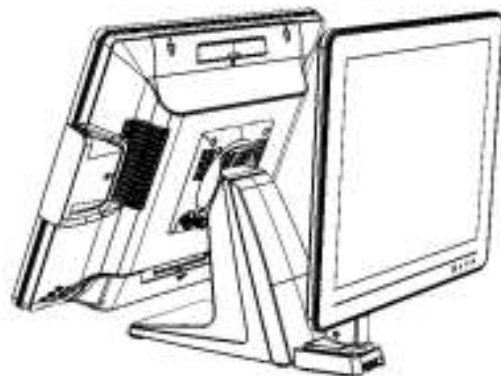
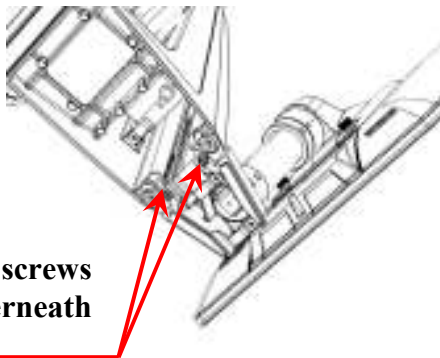
VFD is connected to the COM3 (COM3 has internal power which has been pre-set as 12V power)

4. Owing to the same VFD/ LCM module already applied in AerPOS AP3615, the tilt angel is limited in PP9617.

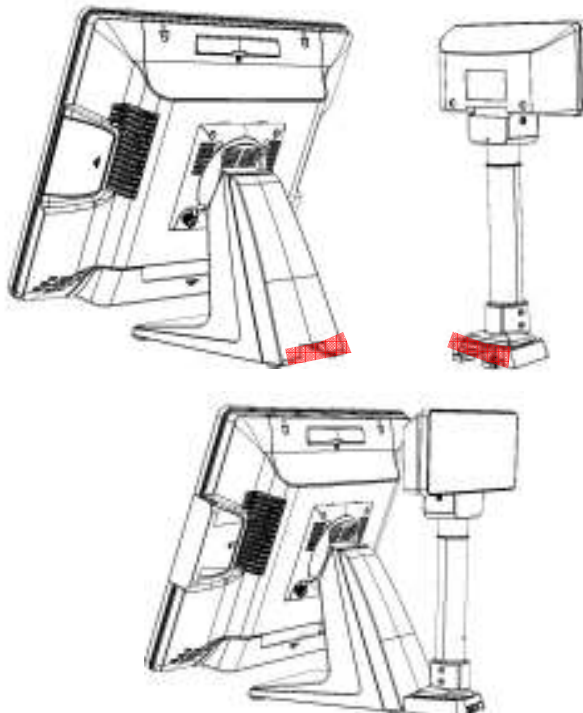
## 15" Pole Type 2<sup>nd</sup> Display Installation



Fasten 2 screws  
underneath



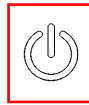
## Pole Type VFD/LCM Installation



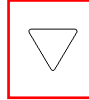
1.

## OSD Function and Adjustment

### OSD function and adjustment



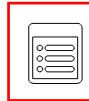
Back Light Power (finger touch for 5 seconds)  
Back Light Power On – **Blue** LED indication  
Back Light Power Off – **Red** LED indication  
P-CAP Touch re-calibrates during Power Off and On



Button Down (finger touch for 2 seconds)  
Back Light Dimmer Down



Button Up (finger touch for 2 seconds)  
Back Light Dimmer Up

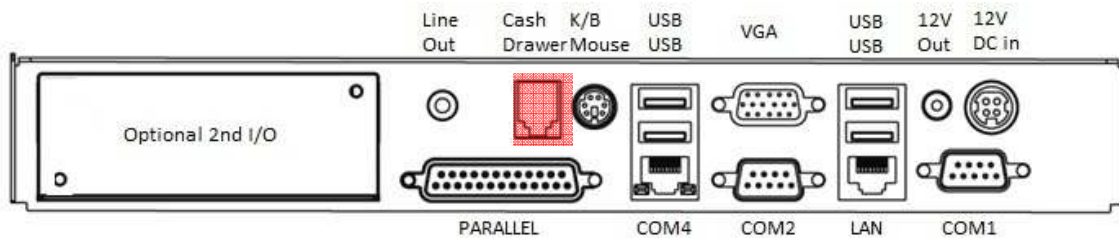


No Function / Reserve Function for AerTouch Monitor

## Cash Drawer Installation

### AerPOS Series PP-9617

Before connecting the cash drawer to the **PP-9617**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **PP-9617**.



Note: If the cash drawer cannot be detected by the system, please refer to [trouble shooting](#).

Up to two cash drawers may be driven from this port. Driving voltage of the solenoid is DC+12V. I/O port 284 is used for drawer operation. A test program is supplied, for Linux and Windows, source code of which is available on request by software developers.

	Value	Description
Byte 1 (0xA0)	0x00	GPIO / 0x01 or DIO / 0x00.
Byte 2-3 (0xA1 ~ 0xA2)	0xA07	Output address.
Byte 4-5 (0xA3 ~ 0xA4)	0xA07	Input address.
Byte 6 (0xA5)	0xFD	Open cashdrawer1 value.
Byte 7 (0xA6)	0xFB	Open cashdrawer2 value.
Byte 8 (0xA7)	0xFF	Close cashdrawer value.
Byte 9 (0xA8)	0x01	Cashdrawer status mask.

## Chapter 3

# Software Installation and Setup

**PP-9617** comes with a variety of drivers for different operating systems.

You can download all the necessary drivers and utilities from <http://www.fecpos.com>.

Or send an e-mail to the Customer Service Department of FEC for further assistance.

## Chipset Driver Installation

### Intel Chipset Installation Utilities for Windows XP

1. Download drivers from website or insert the Driver CD into your CD ROM Drive.
2. Execute **Setup.exe** and Click **Next**.



3. Read the License Agreement and click **Yes** & Click **Next** and the drivers for the Intel Chip set will install.



4. Click **Next** and choose “restart computer”, then click to **Finish**.

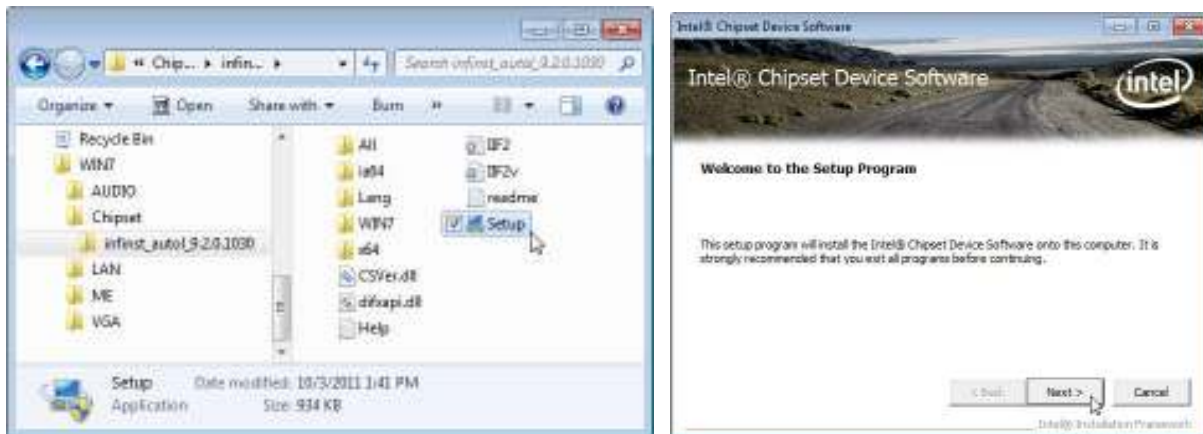


## Intel Chipset Installation Utilities for Windows 7

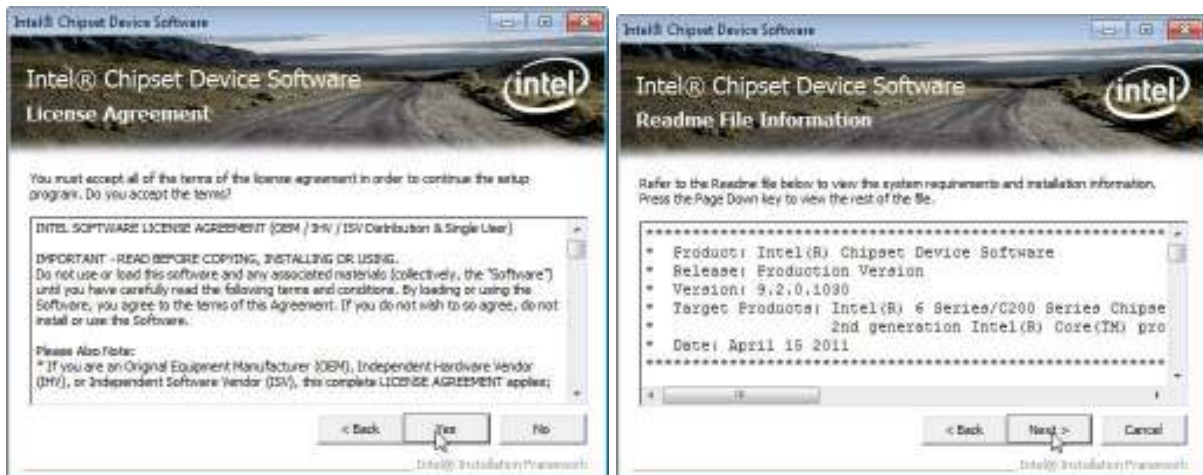


## AerPOS Series PP-9617

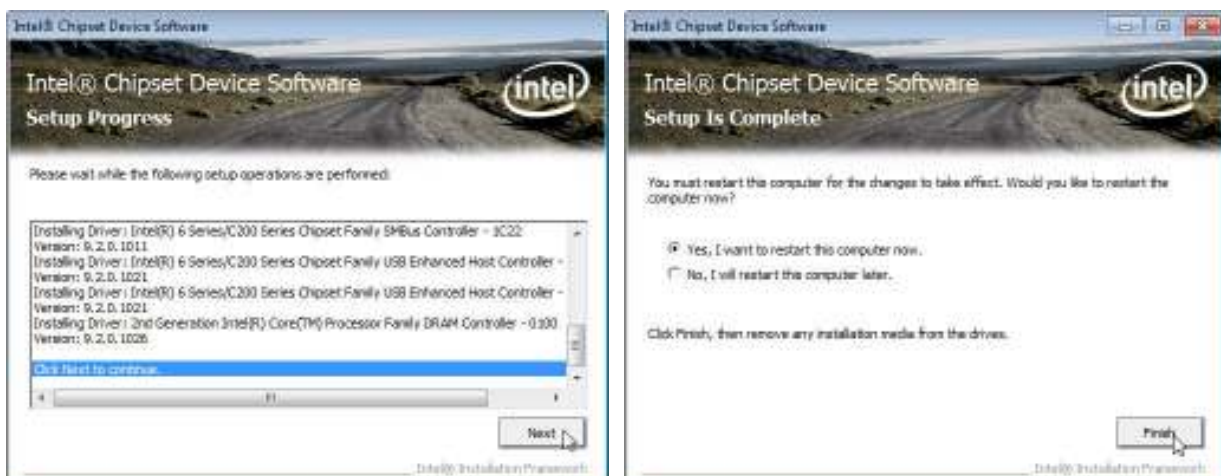
1. Download drivers from website or insert the Driver CD into your CD ROM Drive.
2. Execute **Setup.exe** and Click **Next**.



3. Read the License Agreement and click **Yes** & Click **Next** and the drivers for the Intel Chip set will install.



4. Click **Next** and choose restart computer for finishing the Chipset Driver, click to **Finish**.

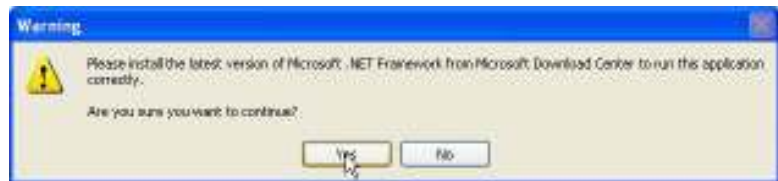


## .Net Framework 3.0 Tool Installation

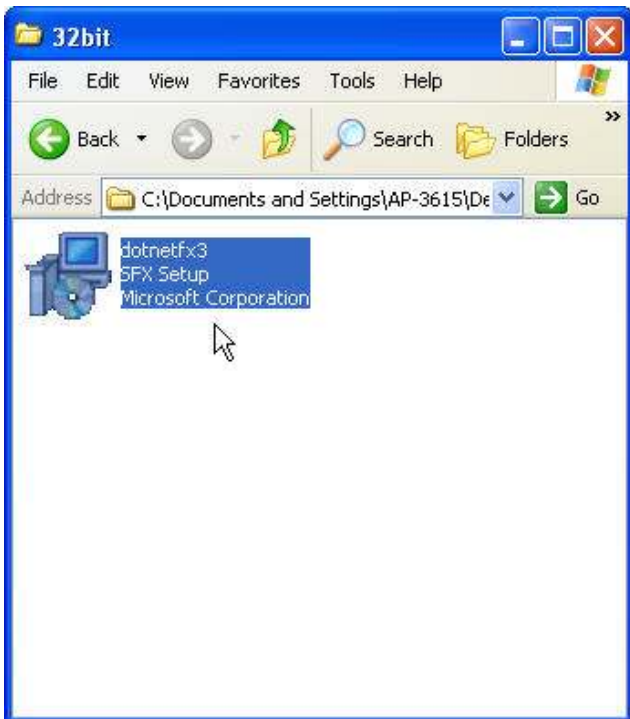


## .Net Framework 3.0 Tool for Windows XP

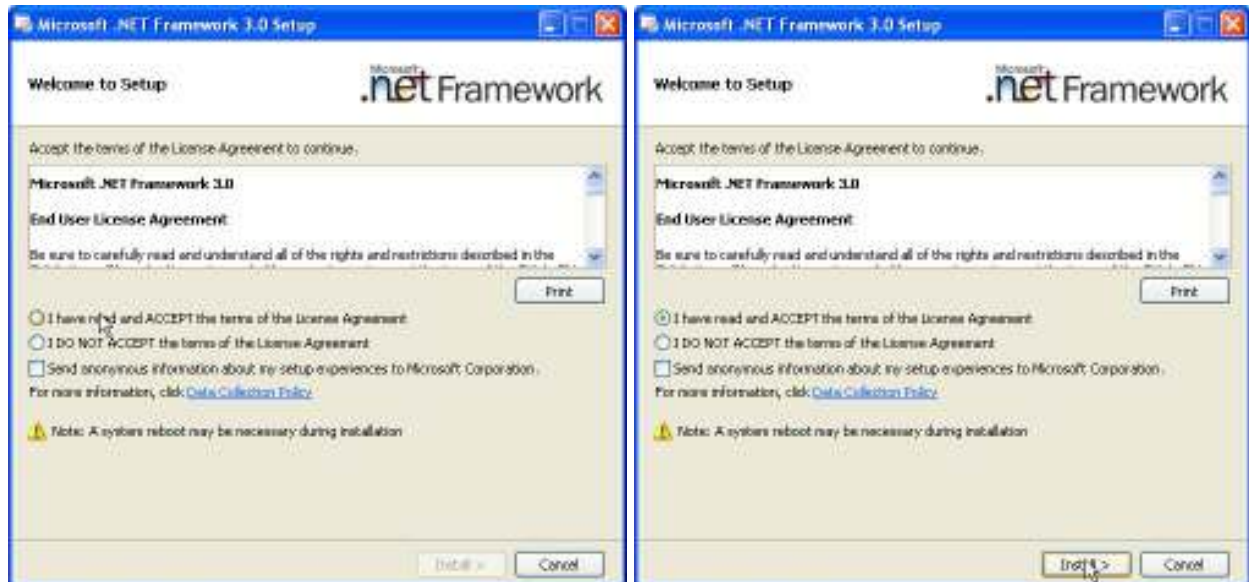
1. Download drivers from FEC website or insert the Driver CD into your CD ROM Drive.
2. Double click **Setup.exe**, and Click **Next** to start tool installation



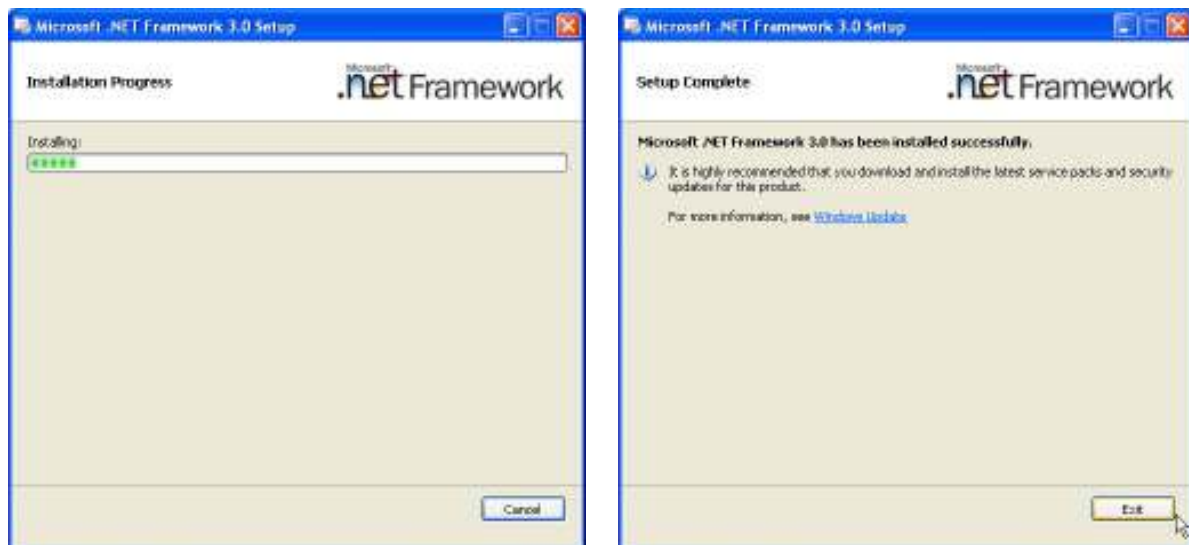
3. Execute dontnetfx3 for further **setup**



4. choose **I have read and ACCEPT** the terms of the license **Agreement** and click **Install** for the following steps



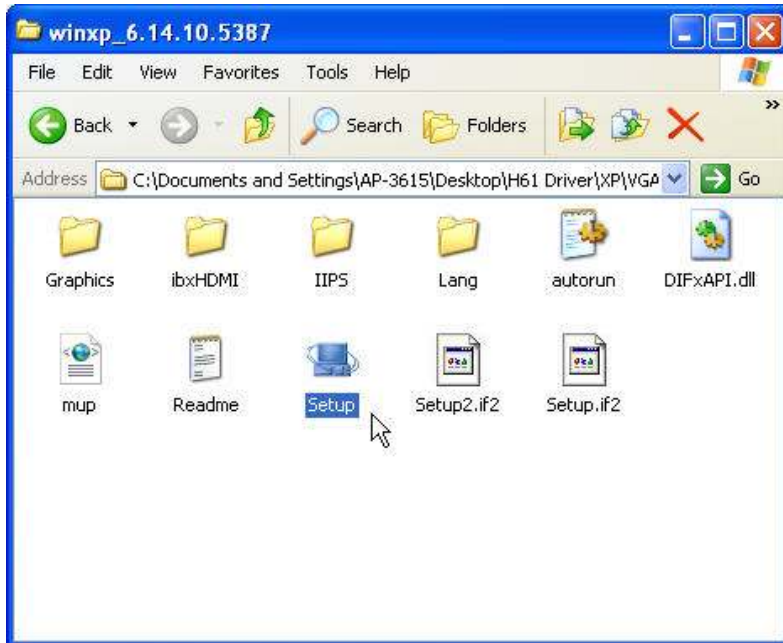
- Click the message pop out to check for the detail process. Finally, click **Exit** to finish the installation.



## VGA Driver Installation

## VGA driver installation for Windows XP

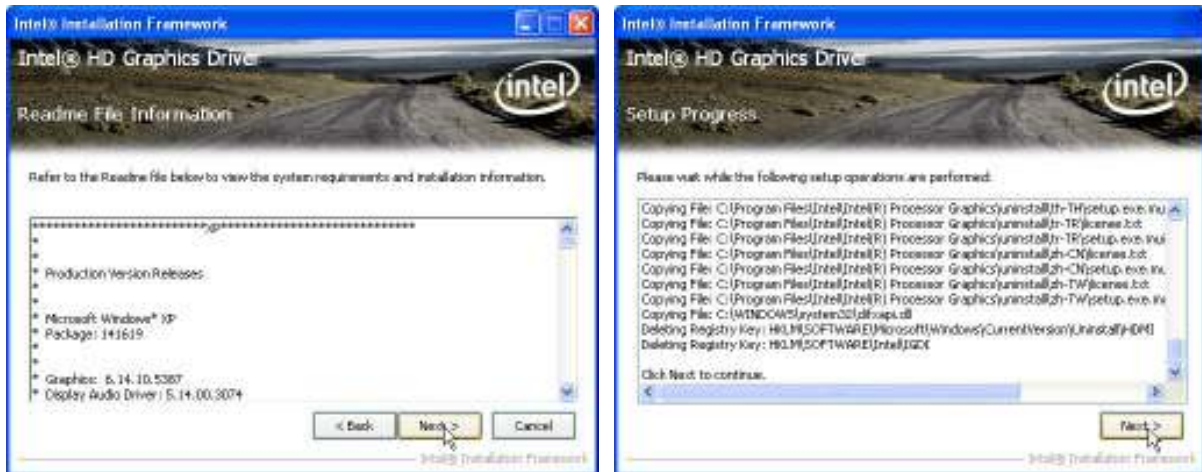
1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Execute **Steup.exe**



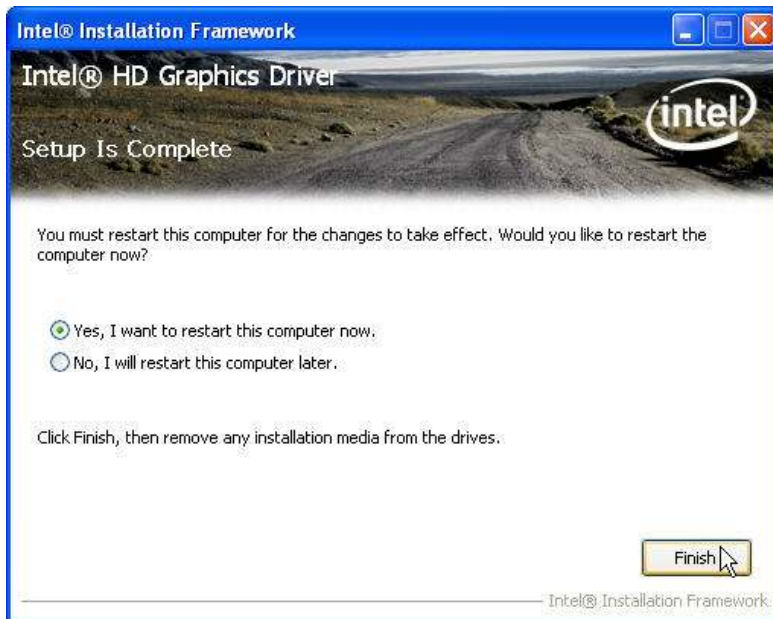
3. Select **Next** and click **Yes** of License Agreement Page.



4. Select **Next** to continue driver installation.



5. Finally, **Finish** and **Restart** the system



## VGA driver installation for Windows 7

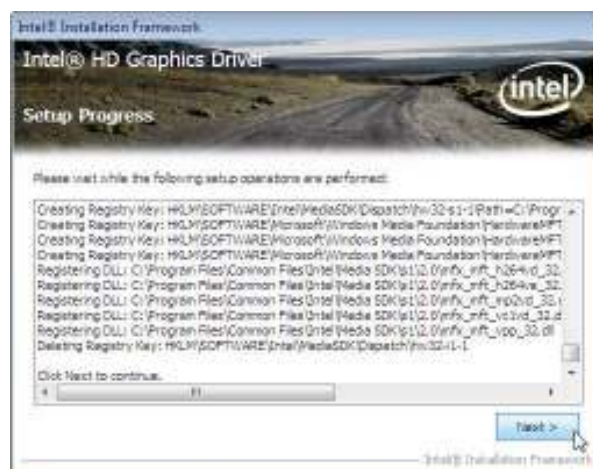
1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Execute **Steup.exe** and select **Next**



3. Click **Yes** of License Agreement Page.

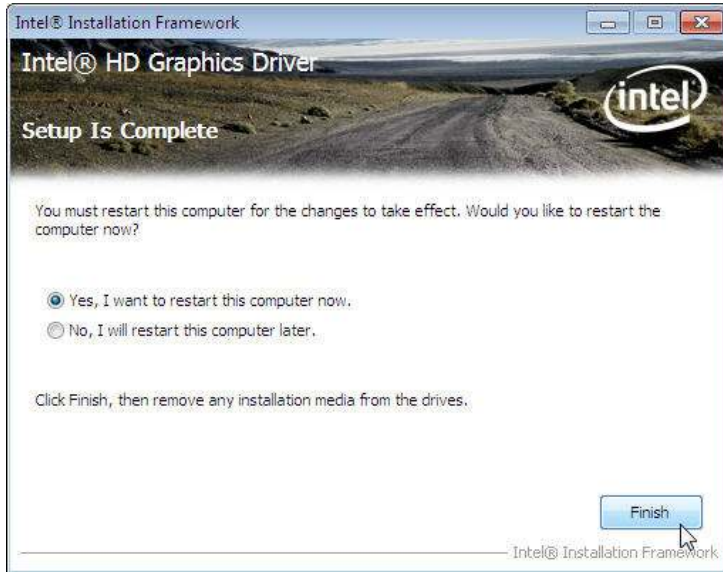


4. Select **Next** to continue driver installation.





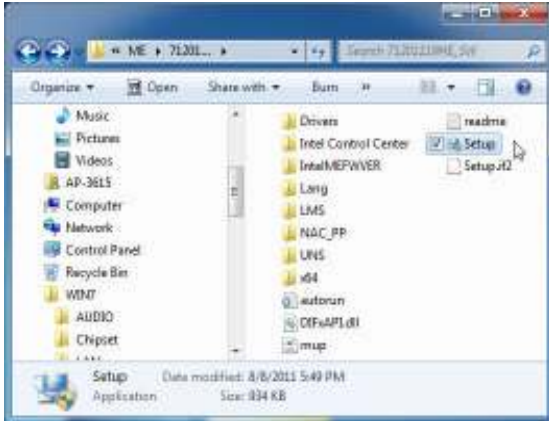
5. Finally, **Finish** and **Restart** the system



# Intel Management Engine Components Driver Installation

## VGA driver installation for Windows 7

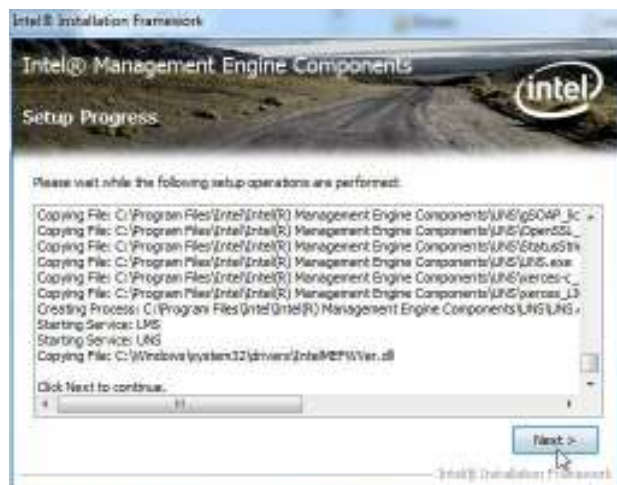
1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Execute **Steup.exe**



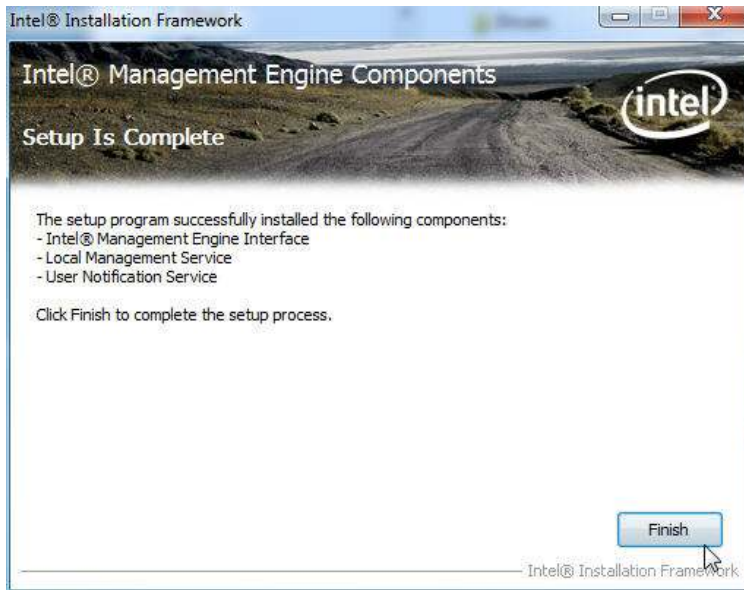
3. Select **Next** and click **Yes** of License Agreement Page.



4. Select **Next** to continue driver installation.



5. Finally, **Finish** and **Restart** the system





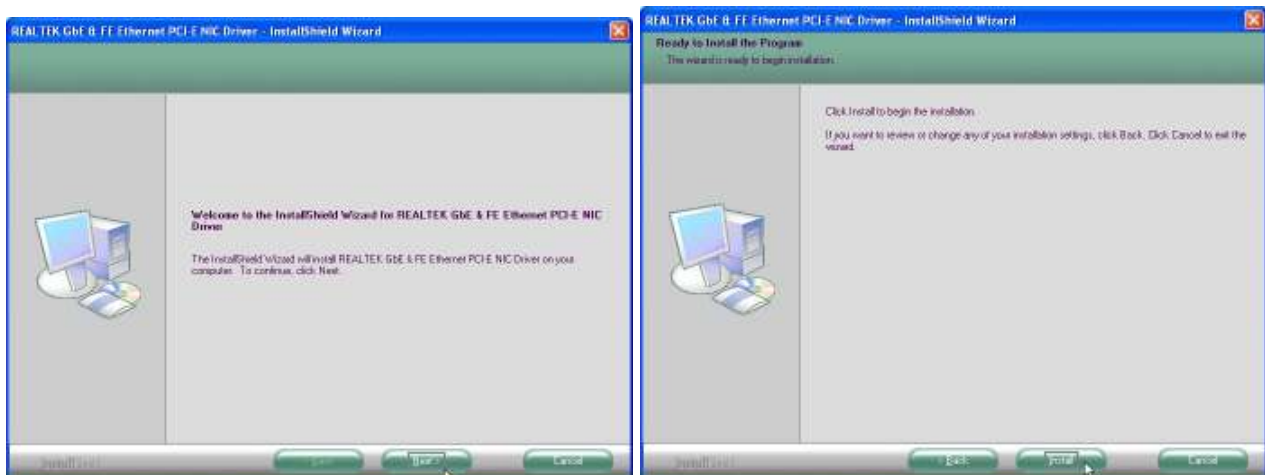
## LAN Driver Installation

### Realtek RT8111E LAN Driver Installation for Windows XP

1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Execute **Setup.exe**.



3. Click **Next** to continue

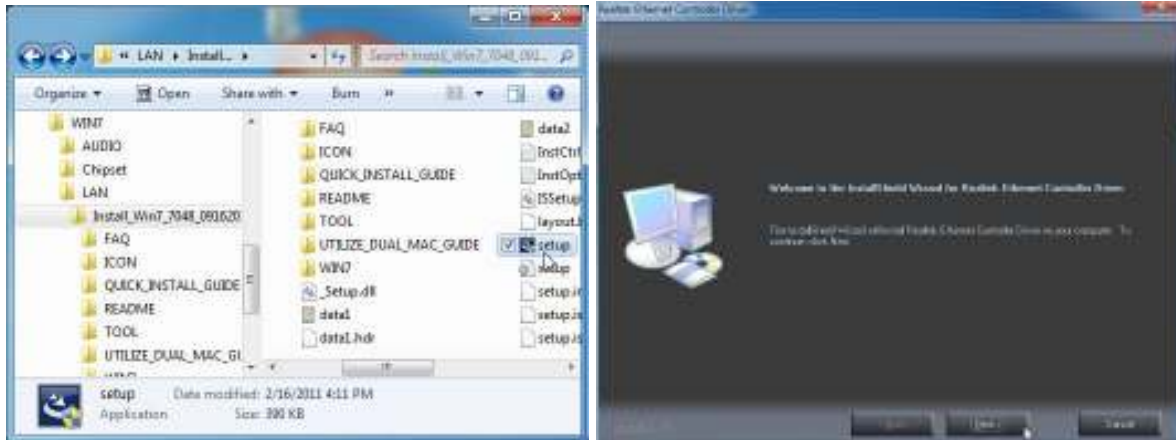


4. Click **Finish** to complete the installation procedure.

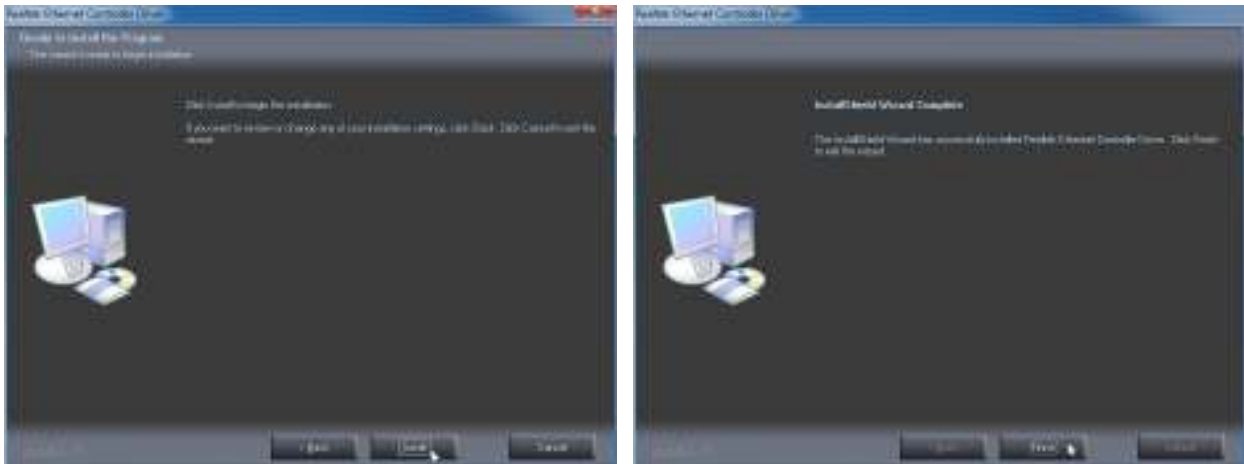


## Realtek RT8111E LAN Driver Installation for Windows 7

1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Execute **Setup.exe**.



3. Click **Next** to continue and **Finish** to complete the installation procedure.

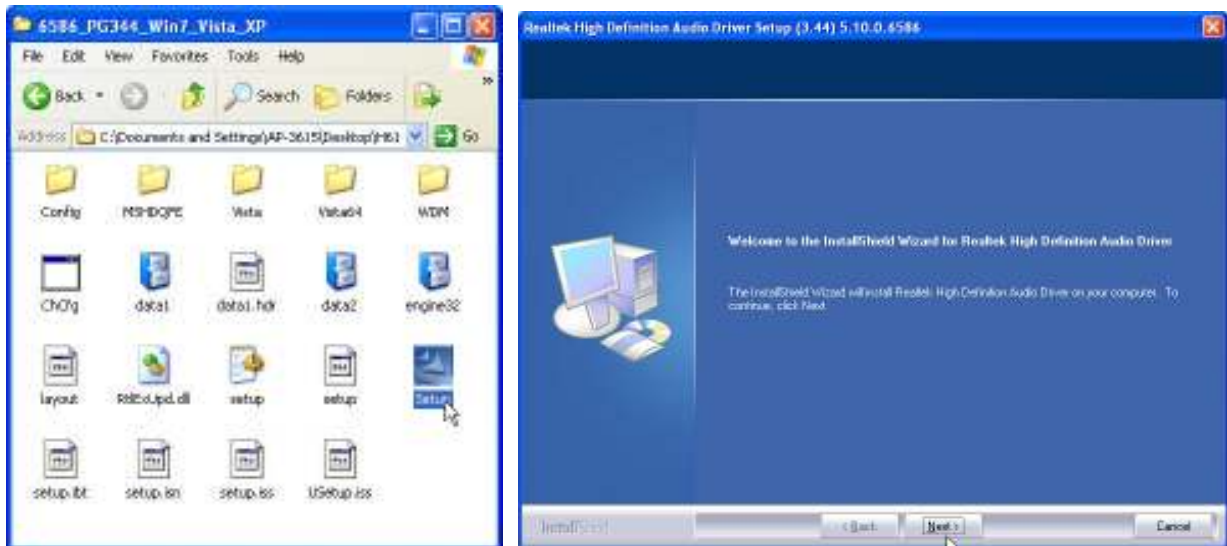


## Audio Driver Installation

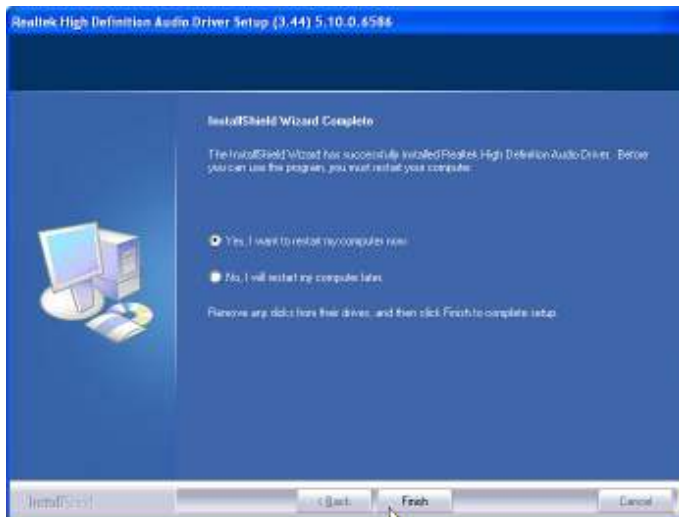
### Realtek ALC887 Audio Driver Installation for Windows XP & Windows 7

1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Double click **Setup.exe**, and Click **Next** to continue

## AerPOS Series PP-9617



3. Click **Finish** and restart the system.



## FEC P-Capacitive/ Resistive Touch Utility (EETI Controller)

FEC Projective – Capacitive Touch Utility Introduces:

1. Mode of FEC Capacitive Touch Panel and default settings
2. EETI TouchKit Tools Installation

### Mode of FEC P-Capacitive/ Resistive Touch Panel

	Win XP, POS Ready 2009	Win7, POS Ready7
Mouse Mode	Yes Driver Needed	Yes Driver Needed
Touch Mode	N/A	Yes No Driver Needed

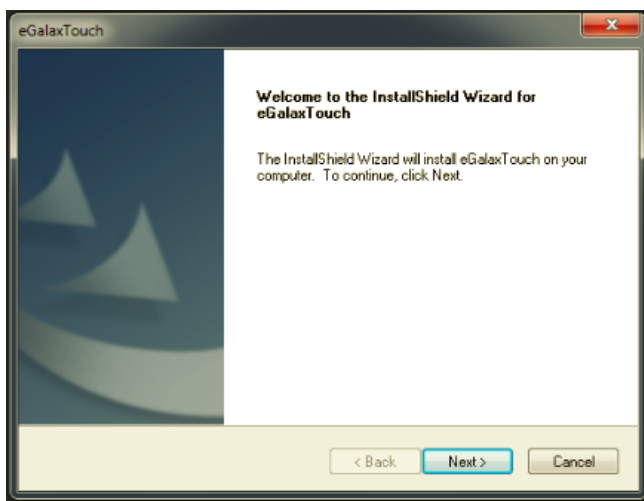
## EETI TouchKit Tools Installation

### EETI TouchKit Tools Installation for Windows XP

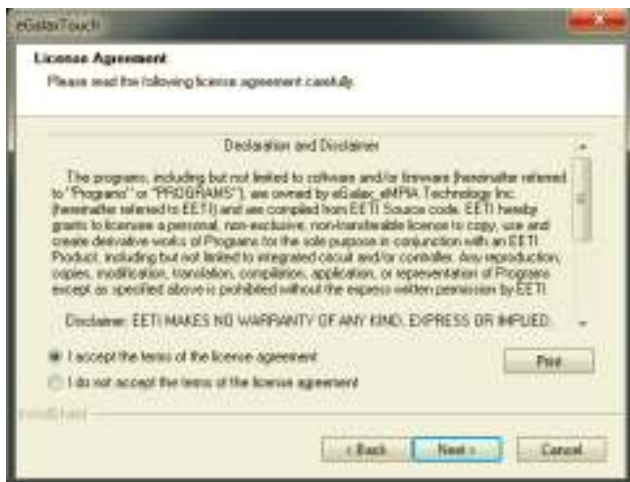
1. Down load Touch Kit for WinXP from FEC website.
2. Execute **Setup.exe**



3. Click **Next**



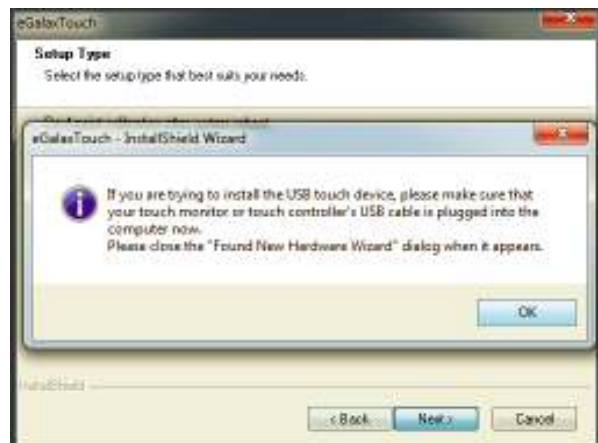
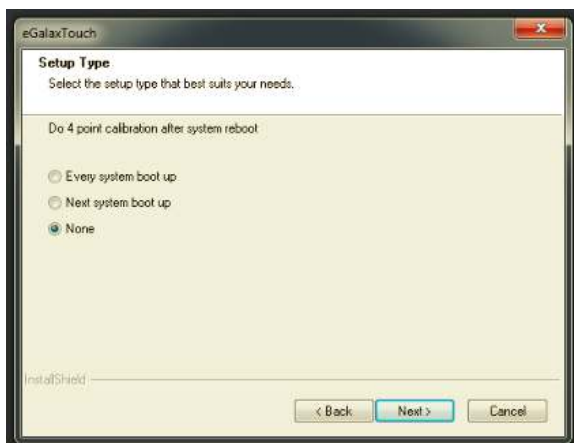
4. Click **Next**



5. Click **Next** and do not choose RS232



6. Select **None**



7. Click Next for further installation process



8. Select No



## TouchKit Control Panel for P-Capacitive/ Resistive Touch

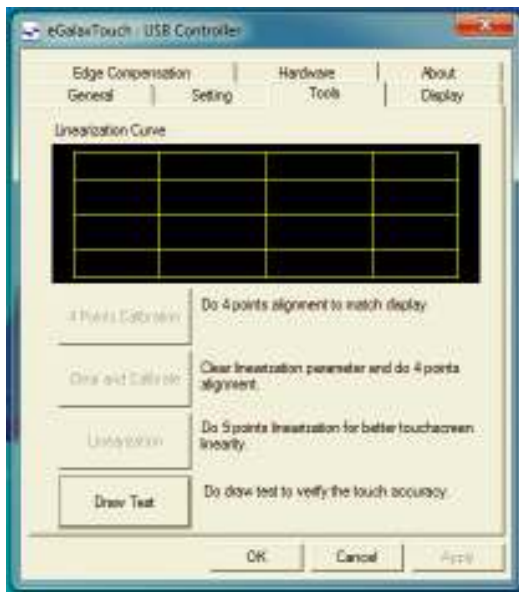
This section explains the different options in the TouchKit control Panel.



### Tools tab

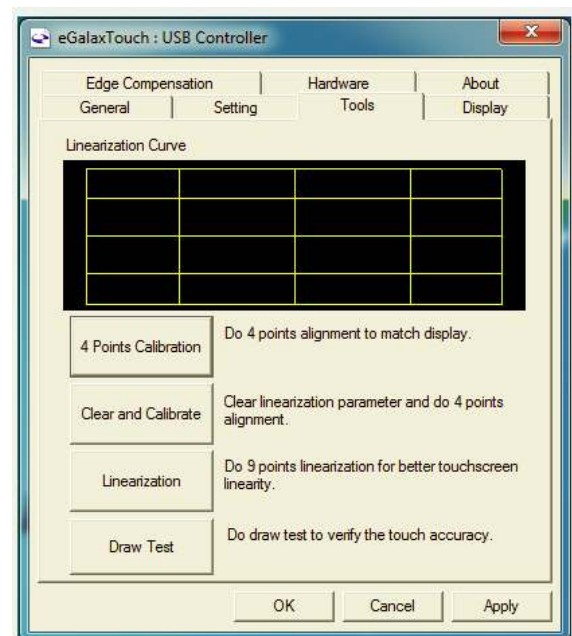
#### P-Capacitive

Do not need to calibrate the touch screen with the **4 Points**.



#### Resistive

The tools tab allows you to below calibrate the touch screen with the **4 Points**.



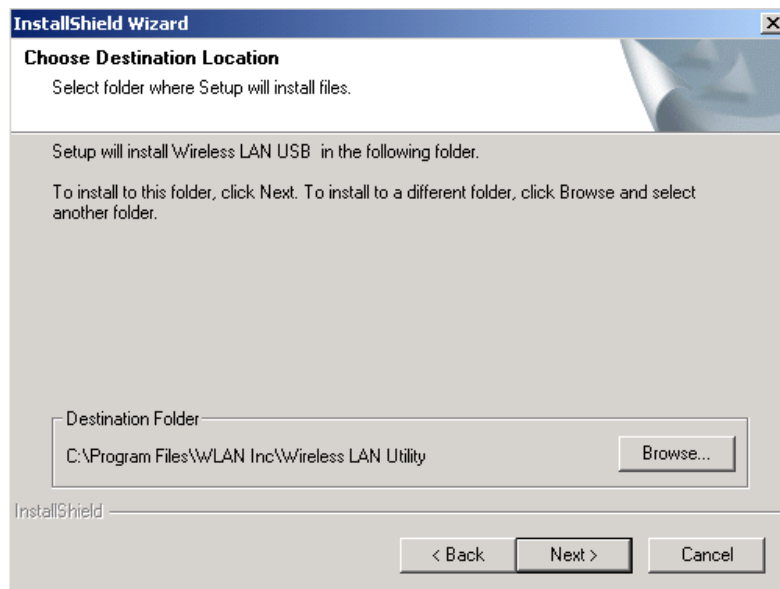
## Wireless LAN Driver Installation

### Wireless LAN Driver Installation for all Windows Operating Systems (Optional)

1. Download drivers from website or insert the CD into your CD ROM Drive.
2. Run **Setup.EXE**



3. Click **Next**





## Chapter 4

# Specifications

## PP-9617 Specifications

Aer POS		PP-9617 Performance	
Main Specifications	Chipset	Intel Sandy Bridge H-61	
	Processor	Intel Dual Core Celeron G540 2.5G Intel i3 2120 3.3G Intel i5 2400S 2.5G	
	Memory	DDR3 Standard 2GB, Max 8GB	
	Power Supply	12V 150W	
	Thermal	Smart Fan	
	Storage Device	2 x 2.5" SATA Driver Bay (RAID 1 Optional)	
	Speakers	Internal Speaker 2W x 2	
Touch Display	Display Design	17" True Flat (Ultra Slim) Bezel Free	
	Touch	Projective-Capacitive (Tempered Glass)	5W Resistive
	Backlight	LED	LED
	Brightness	250 nits / 350 nits	
	Backlight MTBF	30 K hours / 50 K hours	
Peripherals & Optionals	MSR	Track 1/2/3 , USB interface	
	Finger Print Receiver	Optical Finger Print Receiver, USB interface	
	RFID Reader	13.56M Hz RFID reader , USB interface	
	I - Button Reader	USB interface	
	Optional COM Port	Additional Stand USBx1; COM 5; 12V Power USB x 1	
	Wireless LAN	802.11.b.g.n wireless LAN , USB interface	
	VFD	(Integration Type) 20x2 (9mm) Character Mode	
	LCM	(Integration Type) 20 x 2 Character Mode (Integration Type) 240x64 Graphic Mode	
	2 <sup>nd</sup> Display	(Integration Type) 15" 2nd Monitor	

## Chapter 5

# Troubleshooting

Please note that the following troubleshooting guide is designed for engineer who has strong computer hardware knowledge or Engineers and Maintenance.

### Touch Panel Does Not Work

- A) Check “Touch Display Module” is connected well with terminal.
- B) Check HID USB touch device is detected by OS.
- C) (Resistive Touch) Check if the EETI driver or the TouchKit driver has been properly installed. Or try to re-install again (Please refer to the EETI driver and touch kit installation).
- D) (Capacitive Touch) Check if the FEC-AUO Capacitive touch is automatically detected by Windows 7, or properly installed the touch driver in Windows XP.
- E) (Capacitive Touch) Please do not keep the capacitive touch in high humidity and condensing environment, such as out door or bathroom, where might affect the touch performance or might need to be calibrate more frequently.
- F) Check if the cable connects well between touch panels and touch controller
- G) (Capacitive Touch Calibration) Reboot the system, and the Capacitive Touch can be calibrated automatically.

### OSD Panel Cannot Work Precisely

- A) Please touch each single OSD button for more than two seconds in order to trigger the function.
- B) Make sure the finger is not touching more than one button each time.

### Cannot Detect SATA Storage HDD/SSD

- A) Make sure storage device is well connected in the SATA Connector.
- B) HDD FFC cable is not connected properly to the main board or it could be defective.
- C) Check CMOS setup, set SATA HDD to Auto Detect.
- D) On-board SATA port could be defective.

## **LAN Is Not Functioning Properly**

- A) Check if the LAN driver is installed properly.
- B) Check if there are any IRQ conflicts.
- C) Check if the RJ45 cable is properly connected.
- D) The on-board LAN chip could be defective.

## **COM1 ~ COM5 Are Not Functioning Properly**

- A) Check if the I/O ports are enabled in the CMOS setup.
- B) Check if there are any IRQ conflicts.
- C) The main board or I/O board could be defective.
- D) (Reminder) The COM3 is shared by the read I/O and VFD, if you connector the VFD, please remove the device which is connected with external COM3.

## **Cash Drawer Port Is Not Functioning Properly**

- A) Make sure the pin assignment matches between the cash drawer and the RJ11 cash drawer port.
- B) Verify if the digit I/O port address and bit are correct.
- C) The main board could be defective.

# Appendix A:

## Smart Management Tool User Guide

Smart Management Tool is FEC latest hardware management engine built in AerPOS & BP-500 & PP9617. With this tool, user could easily access the data inside the system that could user to identify the status and error during operation.

1. Move this Smart Management.exe to Desktop or any preferred location in your system (Windows XP & Windows 7 only)
2. Double click the .exe file to activate Smart Management as the following picture.



3. Press the Smart Management button aside the PP-9617 for 5 seconds to enter the **Terminal Status**. (This button is just above the external USB connector, Please make sure you did not press the Power Button or HDD LED)



Please refer to the following definition table for the information showed on the **Terminal Status**

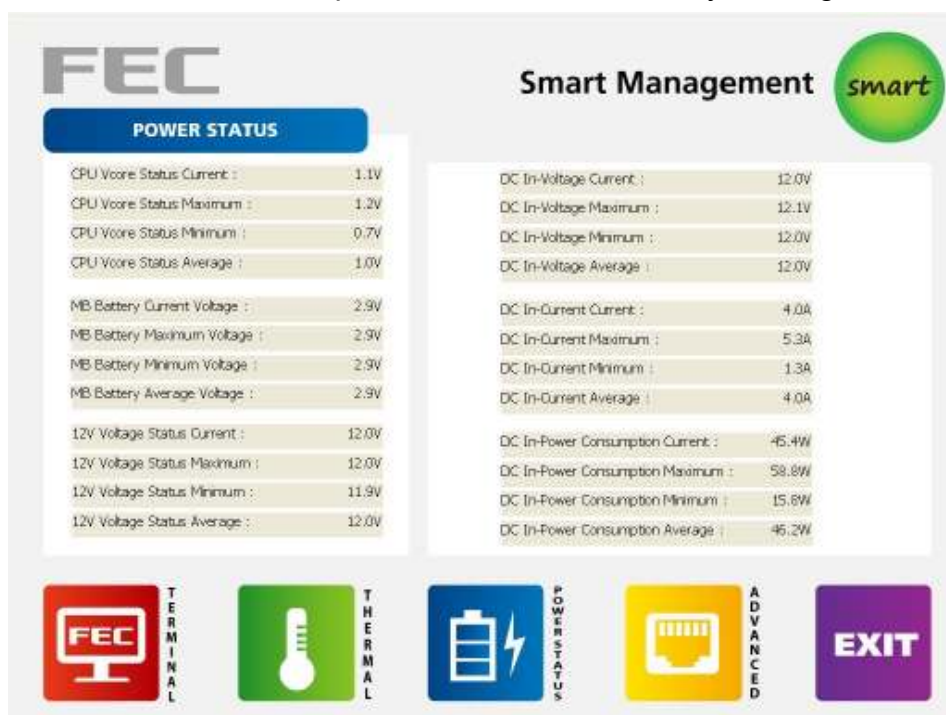
Item	Description
MB Version	Shows the M/B version
BIOS Version	Shows the BIOS version of the M/B
IO Version	Shows the firmware version on the I/O board
Display Version	Shows the firmware version on the Display board (AerPOS only)
Operation Service Hours	Shows the time this system has been powered up
Stand-by Service Hours	Shows the time this system has been connected to A/C input
Abnormal On/Off Count	Shows the times this system has been force disconnect with A/C input
ON/OFF Total	Shows the times this system has been power on & off normally
System Operation Hours	Shows the latest time the system has been operated
Display Module Plug in Time	Shows the times the display module has been re-plugged (AerPOS only)
Total Display Module Standby Hours	Show the time the display module has been connected with the system & the system has been connected to A/C input (AerPOS only)
Total Back Light Hour	Show the time the backlight has been used (AerPOS only)

Each data would be recorded after the system is shutdown normally, for any incorrect operation or force shutdown, only Abnormal On/Off Count & ON/OFF Total will be recorded, the rest data will missed.

4. User could monitor the Thermal & Fan Status inside the system by clicking the icon **Thermal**.



5. User could monitor the power status on the M/B by clicking the icon **POWER STATUS**.



Item	Description
CPU Vcore Status	Shows CPU Vcore status
MB Battery Voltage	Shows the Voltage of M/B battery (If the data of current is too low, please contact FEC Service Department for battery replacement)
12V Voltage Status	Shows the voltage of 12V on the M/B
DC In-Voltage	Shows the voltage of DC-IN (If the data is too low, please check the power adaptor)
DC In-Current	Shows the current of 12V DC-IN(If the data is too low, please check the power adaptor)
DC in-Power Consumption	Shows the power consumption of AP-3615 or BP-500

6. In **Advanced mode**, there are 3 settings could be accessed by the user.

- COM Port Voltage Setting: Please ensure this setting must be operated by the engineer who with strong knowledge of AerPOS & BP-500 and its devices. Inappropriate operation might cause the damage of the powered devices.
- OSD Enable or Disable (AerPOS only)
- Backlight Brightness: Display only, the adjustment must be through OSD



7. Following is the example to adjust the setting of COM1, COM2 & COM3 from RI mode to 5V enabled.

- Click COM1 5V, COM2 5V, COM3 5V and COM Port Set





b. Apply the change by click the icon



c. Double confirm to apply this change



- d. Shutdown the system and proceed the cold reboot
8. User could enable/disable the OSD function by select following options. After apply the setting, **A cold reboot is required.**

